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Amendment to the Claims:

1. (Cancelled)

2. (Cancelled)

3. (Previously Presented) The A device according to claim 1 wherein, for the evacuation of a chamber to pressures in the high vacuum range, comprising:  
an atmospheric pressure side vacuum pump;

5 a mechanical-kinetic vacuum pump with a rotor and a stator, the stator  
having a rotationally symmetric inner surface, which is free of ribs and projections  
and conforms to an outer geometry of the rotor, the rotor of the mechanical-kinetic  
vacuum pump having a structure for effecting gas conveyance from a suction side to a  
pressure side connected to the pressure side vacuum pump;  
10 the structure for effecting the gas conveyance includes webs whose  
pitch and width decrease from the suction side to the pressure side, an outer diameter  
of the rotor and an inner diameter of the stator of the mechanical-kinetic vacuum  
pump decrease from the suction side to the pressure side, the rotor includes including  
a hub, said hub carrying the webs and being formed conically in such a manner that  
its diameter increases from the suction side to the pressure side.

4. (Previously Presented) A device for the evacuation of a chamber to pressures in the high vacuum range, comprising:

5 a mechanical-kinetic vacuum pump with a rotor and a stator, the stator  
having a rotationally symmetric inner surface, which conforms to an outer geometry  
5 of the rotor, the rotor of the mechanical-kinetic vacuum pump having a structure for  
effecting gas conveyance from a suction side to a pressure side connectable to a  
pressure side vacuum pump;

10 the structure for effecting the gas conveyance including webs whose  
pitch and width decrease from the suction side to the pressure side, an outer diameter  
of the rotor and an inner diameter of the stator of the mechanical-kinetic vacuum  
pump decrease from the suction side to the pressure side, the outer diameter of the

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rotor and the inner diameter of the stator in a longitudinal section through the suction-side vacuum pump form a curve which arches inwards in such a manner that a slope of the curve decreases from the suction side to the pressure side.

5. (Previously Presented) A mechanical-kinetic vacuum pump for the evacuation of a chamber to pressures in the high vacuum range, comprising:

a rotor and a stator,

the stator having a rotationally symmetric inner surface, which 5 conforms to an outer geometry of the rotor,

the rotor having a hub with webs whose pitch and width decrease from the suction side to the pressure side for effecting gas conveyance from a suction side to a pressure side, a surface defined by the rotor hub in a longitudinal section through the mechanical-kinetic vacuum pump arching outwards in such a manner that the 10 slope of the surface decreases from the suction side to the pressure side, an outer diameter of the rotor and an inner diameter of the stator of the suction-side vacuum pump decrease from the suction side to the pressure side.

6. (Previously Presented) The device according to claim 4, wherein the curve follows a hyperbola.

7. (Cancelled)

8. (Previously Presented) A mechanical-kinetic vacuum pump for evacuating a chamber connected at a suction side to a pressure less than  $10^{-3}$  mbar, the mechanical kinetic vacuum pump comprising:

5 a rotor including a central hub and webs extending outward from the hub in a helical pattern, an angle and width of which decreases from the suction side to a pressure side, an outer diameter of the hub increasing from the suction side to the pressure side;

10 a stator having a rotationally-symmetrical inner surface which matches an outer geometry of the rotor webs, the outer rotor geometry and the stator inner surface decreasing in diameter from the suction side to the rotor side.